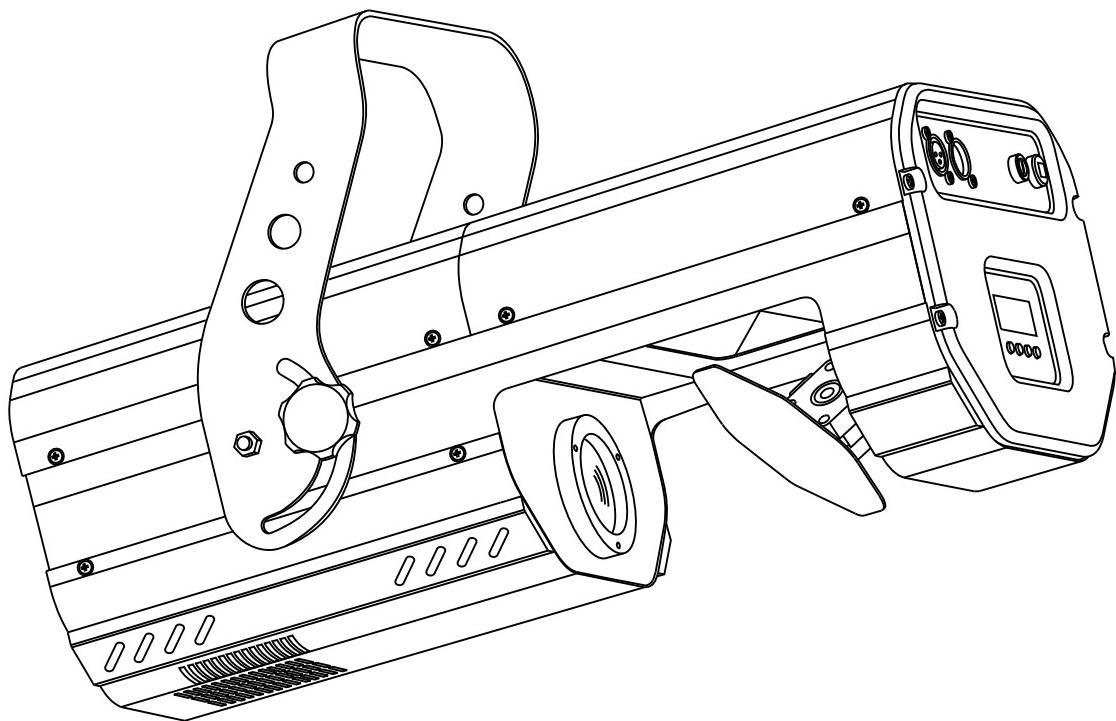




VISION 250

USER MANUAL





VISION 250

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CAUTION!
Keep this device away from rain and moisture!
Unplug mains lead before opening the housing!

**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY
BEFORE YOU INITIAL START - UP!**

1. Safety instructions

Every person involved with installation and maintenance of this device have to:

- be qualified
- follow the instructions of this manual

CAUTION!
**Be careful with your operations. With a high voltage you can suffer
a dangerous electric shock when touching the wires!**

This device has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Important:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!

Always plug in the power plug last. The power-plug has to be accessible after installing the device.

Make sure that the power-cord is never crimped or damaged by sharp edges. Check the device and the power-cord from time to time.

Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.

This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.

The electric connection, repairs and servicing must be carried out by a qualified employee.
Do not connect this device to a dimmer pack.

Do not switch the fixture on and off in short intervals as this would reduce the lamp's life.

During the initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective.

Do not touch the device's housing bare hands during its operation (housing becomes hot)!
For replacement use lamps and fuses of same type and rating only.

CAUTION! EYEDAMAGES!
Avoid looking directly into the light source
(meant especially for epileptics) !

2. Operating determinations

This device was designed for indoor use only.

If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.

When taking the device into operation, please make sure that the housing is closed firmly with all the necessary screws tightened up.

Never run the device without lamp!

Do not shake the device. Avoid brute force when installing or operating the device.

When choosing the installation-spot, please make sure that the device is not exposed to extreme heat, moisture or dust. There should not be any cables lying around. You endanger your own and the safety of others!

The minimum distance between light-output and the illuminated surface must be more than 0,8 m.

Make sure that the area below the installation place is blocked when rigging, derigging or servicing the fixture.

Always fix the fixture with an appropriate safety-rope. Fix the safety-rope at the correct holes only.

Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.

The lamp must never be ignited if the objective-lens or any housing-cover is open, as discharge lamps may explode and emit a high ultraviolet radiation, which may cause burns.

The maximum ambient temperature $t_a = 45^\circ \text{C}$ must never be exceeded. Otherwise, the lamp is switched off and the fixture is out of operation for 5 minutes.

CAUTION!

The lens has to be replaced when it is obviously damaged, so that its function is impaired, e. g. due to cracks or deep scratches!

Operate the device only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the device. Most damages are the result of unprofessional operation!

CAUTION!

The lamp has to be replaced when it is damaged or deformed due to the heat!

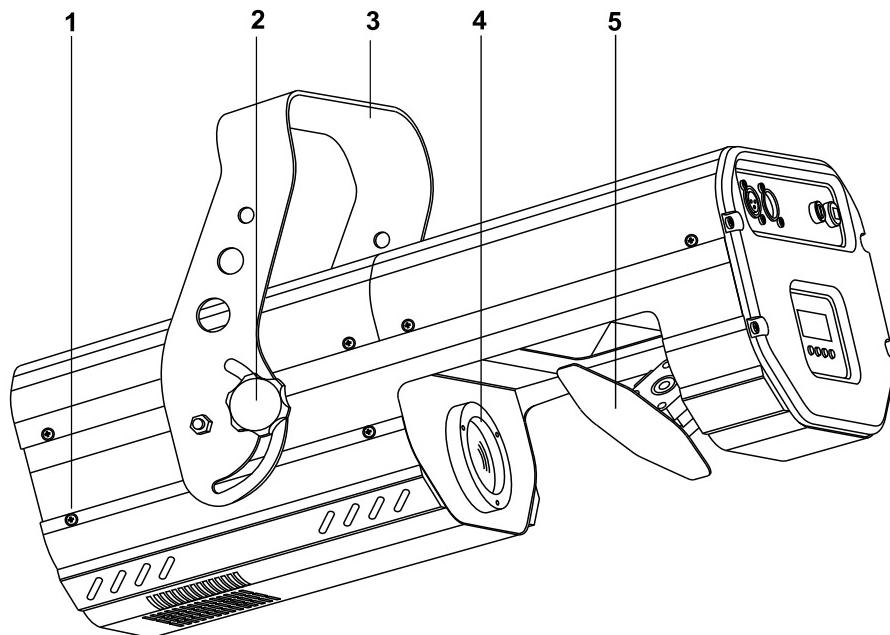
Wait at least 15 minutes before removing the lamp.

Please use the original packaging if the device is to be transported.

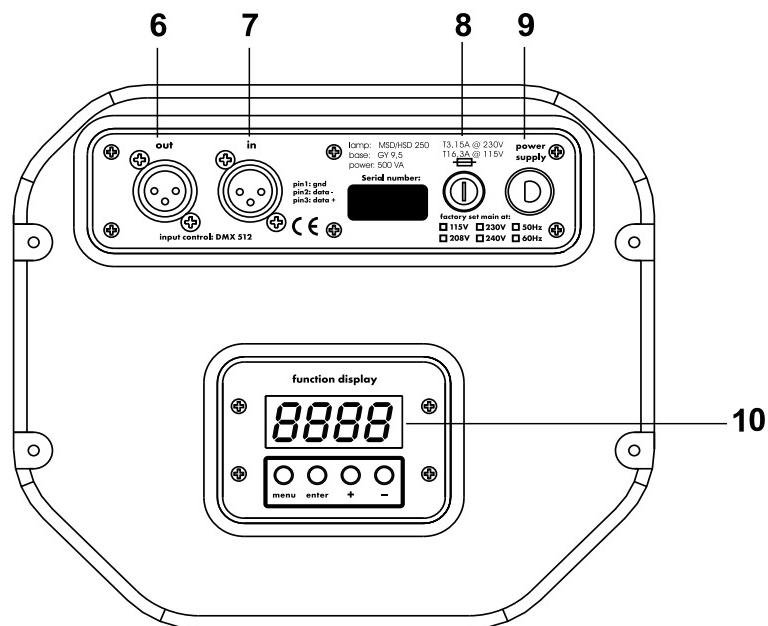
Please consider that unauthorized modifications on the device are forbidden due to safety reasons!

If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns, electric shock, burns due to ultraviolet radiation, lamp explosion, crash etc.

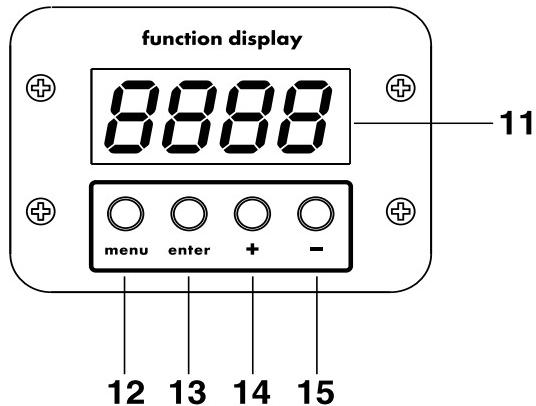
3. Description of the device



- 1 - Fastening screws
- 2 - Fixation screw for bracket
- 3 - Bracket
- 4 - Objective
- 5 - Mirror



- Front panel:**
- 6 - DMX Output
 - 7 - DMX Input
 - 8 - Fuseholder
 - 9 - Powercord
 - 10 - Control board



- Control board:**
- 11 - Display
 - 12 - Menu-button
 - 13 - Enter-button
 - 14 - Up-button
 - 15 - Down-button

4. Installation

4.1 Fitting the lamp

DANGER!
Install the lamps with the device switched off only.
Unplug from mains before !

To insert the lamp (MSD/HSD 250 or MSD250/2) open the cover by loosening the fastening screws at the sides of the cover.

Do not install a lamp with a higher wattage! A lamp like this generates temperatures the device is not designed for. Damages caused by non-observance are not subject to warranty.

Insert the lamp now. Do not touch the glass bulb with bare hands during the installation! Please follow the lamp manufacturer's notes!

Before you close the cover again, make sure that the lamp is installed tightly into the lampholder system.

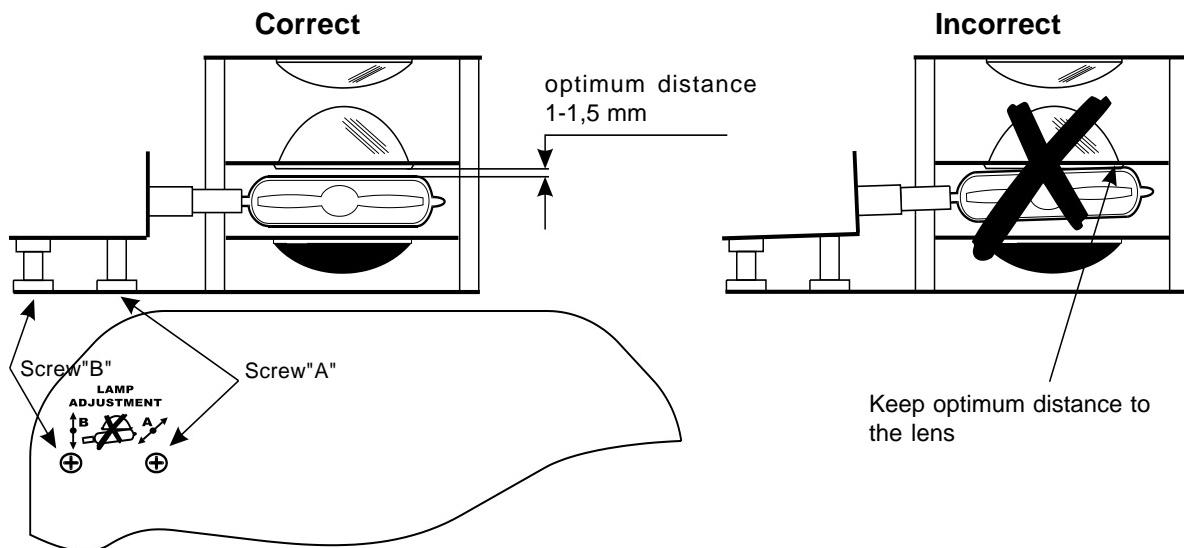
Adjust the optimal distance 1-1.5 mm from the lens by turning the screw "A" (see the drawings "Lamp adjustment" below) on the rear panel of the fixture.

Reclose the housing and tighten the fastening screws.

Before striking the lamp, reset the "LATI" counter in the main menu of the control board, by pressing the "+" and "-" buttons at the same time and then confirming with the "Enter"-button.

Do not operate this fixture with opened housing-cover!

Lamp adjustment:



The lampholder is aligned at the factory. Due to differences between lamps, fine adjustment may improve light performance.

Strike the lamp, cancel all effects, open the shutter and set the dimmer intensity onto 100 % and focus the light on a flat surface (wall). As the optimum distance of the lamp from lens was adjusted during the installing or changing the lamp (by turning the screw "A"), it is necessary to adjust only the second position by turning the screw "B", in order to center the hot-spot (the brightest part of the beam).

If the hot spot seems to be too bright, you can lower its intensity by moving the lamp closer to the reflector. Do so by turning the screw "A" until the light is evenly distributed.

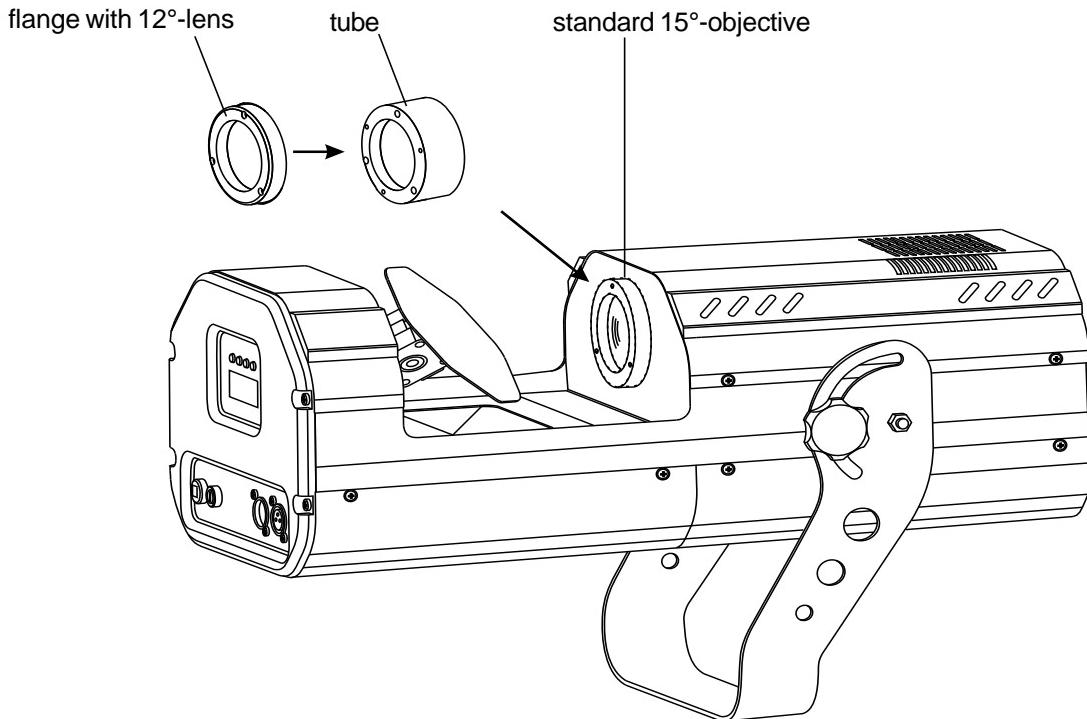
If the light on the edge seems to be brighter as in the center, the lamp is too close at the reflector. In this case, you need to move the lamp away from the reflector until the light is evenly distributed and the beam appears bright enough.

4.2 Installation of an optional lens

The device is delivered with a 15°-standard lens. If you wish to insert an optional 12° or 18°-lens (it is not standard part of delivery, only for request), please follow the instructions below:

Optional 12°-lens:

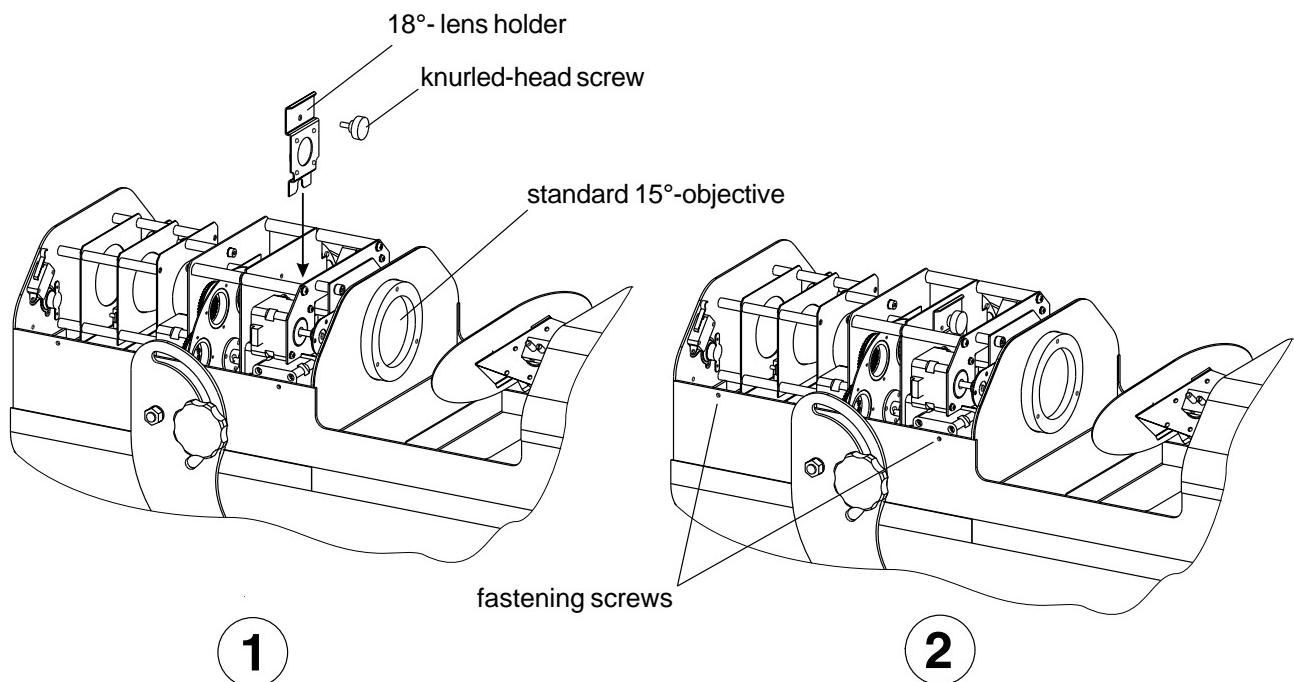
Remove the 15°-objective by loosening the 3 fastening screws with an appropriate screwdriver. Fix the tube with the 3 screws and then screw the flange with 12°-lens.



Optional 18°-lens:

1. Open the cover by loosening the fastening screws at the sides of the cover. Unscrew the knurled-head screw on the plate of the light-output. Install the optional 18°-lens holder.

2. Fix the 18°-lens holder with the knurled-head screw. Close the cover and tighten the fastening screws at the sides of the cover.

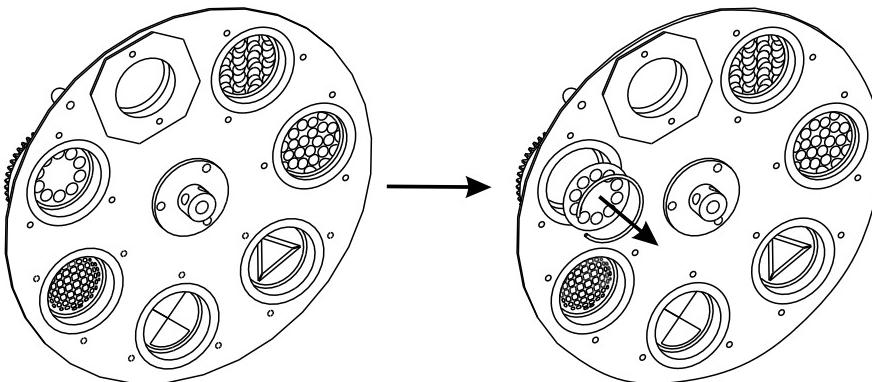


4.3 Inserting/Exchanging rotating gobos

DANGER!
*Install the gobos with the device switched off only.
Unplug from mains before!*

Open the cover by loosening the fastening screws at the sides of the cover.

If you wish to use other forms and patterns as the standard-gobos, or if the gobos are to be exchanged, remove the fixation-ring with an appropriate tool. Remove the gobo and insert the new gobo. Press the fixation-ring together and insert it in the front of the gobo.



CAUTION!
*Never unscrew the screws of the rotating gobo
as the ball bearing will otherwise be opened!*

4.4 Rigging the fixture

Danger of fire !
When installing the device, make sure there is no highly inflammable material (decoration articles, etc.) in between a distance of min. 0,5 m.

The VISION 250 can be installed in any position without altering its operation characteristics. Install a safety wire that can hold at least 10 times the weight of the fixture. Never use the carrying handles for secondary attachment.

Make sure that the device is fixed properly! Ensure that the structure to which you are attaching the projectors is secure.

For fixing the projectors use the hole provided in the bracket. The hole in the adjustable mounting bracket has a diameter of 10 mm.

For overhead use, fit a safety chain or cord.

4.5 Connection to the mains

Connect the fixture to the mains with the enclosed power-plug.

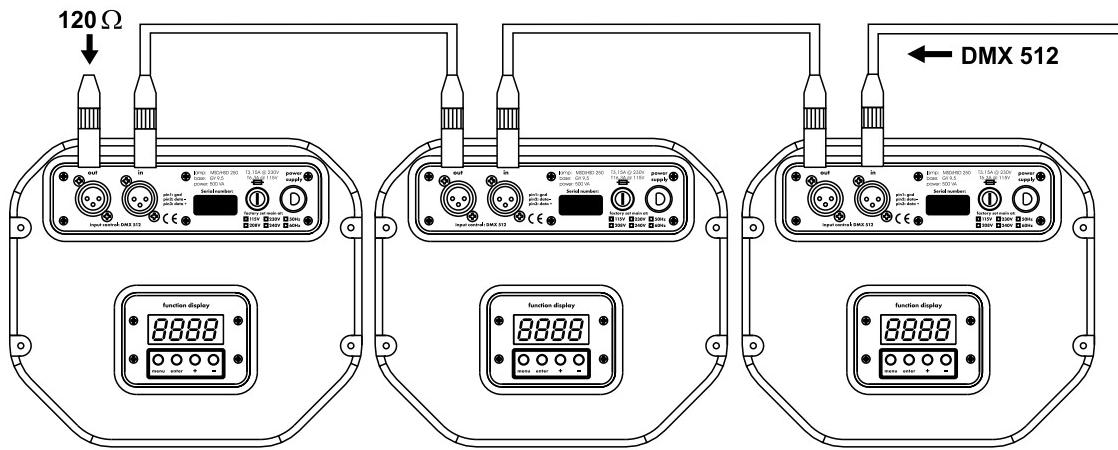
The earth has to be connected!

The occupation of the connection-cables is as follows:

Cable	Pin	International
Brown	Live	L
Light blue	Neutral	N
Yellow/Green	Earth	

4.6 DMX-512 connection/connection between fixtures

The wires must not come into contact with each other, otherwise the fixtures will not work at all, or will not work properly.

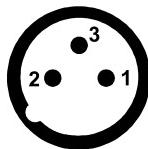


Only use a stereo shielded cable and 3-pin XLR-plugs and connectors in order to connect the controller with the fixture or one fixture with another.

Occupation of the XLR-connection:

DMX - output

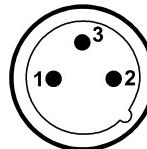
XLR mounting-socket:



- 1 - Ground
- 2 - Signal (-)
- 3 - Signal (+)

DMX-input

XLR mounting-plug:



- 1 - Ground
- 2 - Signal (-)
- 3 - Signal (+)

If you are using the standard DMX-controllers, you can connect the DMX-output of the controller directly with the DMX-input of the first fixture in the DMX-chain. If you wish to connect DMX-controllers with other XLR-outputs, you need to use adapter-cables.

Building a serial DMX-chain:

Connect the DMX-output of the first fixture in the DMX-chain with the DMX-input of the next fixture. Always connect one output with the input of the next fixture until all fixtures are connected.

Caution: At the last fixture, the DMX-cable has to be terminated with a terminator. Solder a 120 W resistor between Signal (-) and Signal (+) into a 3-pin XLR-plug and plug it in the DMX-output of the last fixture.

5. DMX PROTOCOL

Channel 16 bit	Channel 8 bit	Value	Function	Type of control
1	1	0-255	Pan Coarse control of the pan movement	proportional
2	2	0-255	Tilt Coarse control of the tilt movement	proportional
3		0-255	Pan fine Fine control of the pan movement	proportional
4		0-255	Tilt fine Fine control of the tilt movement	proportional
5	3	0 249 250-255	Speed of PAN/TILT movement Max. speed Min. speed Max. speed,black-out while PAN,TILT moving	step proportional step
6	4	0-127 128-139 140-229 230-239 240-255	Lamp on/off,reset,fan speed control From max.speed of fan to min. speed of fan Lamp on,reset No function Lamp off after 3 sec No function	proportional step step step step
7	5	0 10 21 32 42 53 64 74 85 96 106 117 128-190 191-192 193-255	Colours Open/white Turquoise Red Cyan Green Magenta Light blue Yellow Green Pink Blue Orange Forwards rainbow effect from fast to slow No rotation Backwards rainbow effect from slow to fast	proportional proportional proportional proportional proportional proportional proportional proportional proportional proportional proportional proportional proportional proportional proportional step proportional
8	6		No function	
9	7	0-95 96-103 104-135 136-143 144-151 152-159 160-255 160-167 168-175 176-183 184-191 192-199	Frost,cor.filters,3-facet prism Open position (hole) Frost filter 3-facet prism 3200 K correction filter 5600 K correction filter UV filter Prism/gobo macros Macro 1 Macro 2 Macro 3 Macro 4 Macro 5	step step step step step step step step step step step step

Channel 16 bit	Channel 8 bit	Value	Function	Type of control
9	7	200-207 208-215 216-223 224-231 232-239 240-247 248-255	Macro 6 Macro 7 Macro 8 Macro 9 Macro 10 Macro 11 Macro 12	step step step step step step step
10	8	0 1-126 127-128 129-255	3-facet prism rotation control No rotation Forwards rotation from fast to slow No rotation Backwards rotation from slow to fast	step proportional step proportional
11	9	0-31 32-63 64-95 96-127 128-159 160-191 192-223 224-255	Rotating gobos,cont.rotation Open Rot. gobo 1 (dichroic) Rot. gobo 2 (glass) Rot. gobo 3 (metal) Rot. gobo 4 (metal) Rot.gobo 5 (metal) Rot.gobo 6 (metal) Rot. gobo wheel cont. rotation from slow to fast	step step step step step step step proportional
12	10	0-127 128-191 192 193-255	Rotating gobo index,rotating gobo rotation Gobo indexing Forwards gobo rotation from fast to slow No rotation Backwards gobo rotation from slow to fast	proportional proportional step proportional
13	11		No function	
14	12	0-255	Focus Proportional focus control	proportional
15	13	0-31 32-63 64-95 96-127 128-159 160-191 192-223 224-255	Shutter,strobe Shutter closed No function (shutter open) Strobe-effect from slow to fast (max.10 flashes/s) No function (shutter open) Pulse-effect in sequences No function (shutter open) Random strobe-effect from slow to fast No function (shutter open)	step step proportional step proportional step proportional step
16	14	0-255	Dimmer intensity Gradual adjustment of the dimmer intensity from 0 to 100%	proportional

6. Addressing

The control board on the front panel of the VISION 250 allows you to assign the DMX fixture address, which is defined as the first channel from which the VISION 250 will respond to the controller.

If you set, for example, the address to channel 5, the VISION 250 will use the channel 5 to 20 for control.

Please, be sure that you don't have any overlapping channels in order to control each VISION 250 correctly and independently from any other fixture on the DMX data link.

If two, three or more VISION 250 are addressed similarly, they will work similarly.

For address setting follow this procedure:

1. Switch On the VISION 250 and wait until the fixture reset has finished ("rSt" is flashing at the display).
2. Press the **[Menu]** key in order to access the main menu. Browse through the menu by pressing the **[+]** and **[-]** keys until the display shows "**A001**". Confirm by pressing **[Enter]** key and the letter "A" will flash.
3. Use the **[+]** and **[-]** keys to select the desired address.
4. Confirm by pressing **[Enter]** or **[Menu]** to cancel.

Controlling:

After having addressed all VISION 250, you may now start operating these via your lighting controller.

Note: After switching on, the VISION 250 will automatically detect whether DMX 512 data is received or not. If there is no data received at the DMX-input, the display will start to flash "**A001**" with actually set address.

This situation can occur if:

- the 3 PIN XLR plug (cable with DMX signal from controller) is not connected with the input of the VISION 250
- the controller is switched off or defective, if the cable or connector is defective or the signal wires are swap in the input connector.

Note: It's necessary to insert the XLR termination plug (with 120 Ohm) in the last lighting in the link in order to ensure proper transmission on the DMX data link.

7. Remotely controllable functions

7.1 Lamp

The VISION 250 is run with a MSD/HSD250 or MSD 250/2 lamp.

A relay inside of the VISION 250 allows you to switch On and Off the lamp via its own control board on the front panel or via your controller without affecting the rest of the lighting.

7.2 Switching On and Off the lamp by the control board

1. Switch On the VISION 250 and wait until the fixture reset has finished.
2. Press the **[Menu]** key in order to access the main menu. Browse through the menu by pressing the **[+]** and **[-]** keys until the display shows „**LAMP**”. Confirm by pressing **[Enter]** key.
3. Use the **[+]** and **[-]** keys to select "On" for switch On the lamp and "Off" for switch Off the lamp and press **[Enter]** to confirm or **[Menu]** to cancel.

Note: It is also important to note, that the discharge lamp is cold re-strike types, that means, that they have to be cold before re-striking. For this reason, you have to wait 5 minutes (max. speed of fan must be adjusted) after having switched Off the lamp before you can switch it back On again. If you try to switch On the lamp within 5 minutes after having switched it Off, the VISION 250 will store this information and automatically ignite the lamp when the 5 minutes period has expired. The message "**HEAt**" will appear on the control board display. If the ignition of the lamp is seven times unsuccessful, on the display will appear "**LA.Er**", meaning that the lamp could be damaged or even missed, or there could be a failure on the ignitor or ballast.

7.3 Colour wheel

The VISION 250 has one colour wheel with 12 color positions - 11 of these with dichroic colors and the last one open. The wheel can be positioned between two adjacent colors in any position. It is also possible to rotate the color wheel continuously at different speed „Rainbow effect“.

7.4 Rotating gobo wheel

1 metal gobo, 4 glass gobos and 1 dichroic gobo rotating in both directions, indexable, rotating gobo wheel cont. rotation slow to fast. The rotating gobos are interchangeable.

7.5 Effect wheel

This wheel has both hot and cold colour temperature filters (3200 K and 5600 K). Total numbers of colour combinations are 36. Also wash light and UV effect are provided by the special effect wheel.

7.6 3-facet rotating prism

3-facet prism rotating in both directions at different speed is situated at the special effect wheel.

7.7 Focus

Motorized focus enables the beam to be focused anywhere on stage.

7.8 Dimmer / Shutter / Strobe

Smooth 0 - 100 % dimming is provided by the combined mechanical dimmer / shutter unit. This unit may also be used for strobe effect (1 - 10 flashes per second)

7.9 Fan

The VISION 250 is cooled by an axial fan situated at the bottom of the fixture. The speed of the fan (of course the noise) can be continuously reduced if very quiet performance is required.

By the control board using the "**FAnS**" function you can choose 4 types of fan speed operating modes:

1. "HIGH" - high (max) speed of fan

The cooling fan works on max. speed (max. cooling)

2. "reG" - continuous controlling of the fan speed

the fan automatically raises its speed in order to control inside temperature of the lighting, if the temperature inside increases about certain level (the low fan speed reduces the cooling of the lighting). This cycle can repeat several times until the temperature inside is on suitable level.

3. "LoOF" - low speed/Switch Off the lamp operating

the fan keeps the adjusted low speed until the temperature exceeds max. inside temp. Then the VISION 250 automatically switch Off the lamp.

4. "IoHi" - low/high speed of the fan operating

the fan keeps the adjusted low speed until the temperature exceeds max. inside temp. of the fixture, then the VISION 250 automatically switch from low to high the fan speed.

8. Control Board

The control board situated on the front panel of the VISION 250 offers several features. You can simply set the lighting address, read the number of lamp or unit hours, switch On and Off the lamp, run test show, make a reset and also use special functions for manual, demo and service purposes.

The main menu is accessed by pressing the **[Menu]** key - press this one so many times until the display shows message "**A001**" (with actually stored address). Browse through the menu by the pressing **[+]** and **[-]** keys - the display shows step by step these messages: **A001, rPAn, rTilt, 16br, Lati, Poti, LAMP, dEMO, rESE, SPEC**. Press **[Enter]** if you wish to select one of them. The functions provided are described in the following sections and the function hierarchy is shown below.



8.1 Main functions



DMX 512 Address settings

The letter "A" flashes. Use the [+] and [-] keys to select required address (001 - 497) and press [Enter] to confirm or [Menu] to cancel and return to the main menu.



Pan reverse

This function allows you to invert the pan movement. Use the [+] and [-] keys to select "On" if you wish this feature or "Off" if you don't wish this feature and press [Enter] to confirm or [Menu] to cancel and return to the main menu.



Tilt reverse

This function allows you to invert the tilt movement. Use the [+] and [-] keys to select "On" if you wish this feature or "Off" if you don't wish this feature and press [Enter] to confirm or [Menu] to cancel and return to the main menu.



Movement resolution

By this function you can adjust the desired movement resolution 8 or 16 bit. Use the [+] and [-] keys to select "On" if you wish the 16 bit high resolution or "Off" if you wish only 8 bit resolution and press [Enter] to confirm or [Menu] to cancel and return to the main menu.

Note: If you adjust the 16 bit resolution the fixture will occupy 16 DMX channels, if you adjust the 8 bit resolution, the fixture will be operated by only 14 DMX channels. Please, check the DMX protocol.



Lamp On time

This option enables you to read the total number of hours that the lamp has been powered On. Press [Enter] or [Menu] to return to the main menu. In order to reset the counter to 0, you have to hold the [+] and [-]-button and press the [Enter]-button.



Power On time

By this option you can read the total number of hours that the VISION 250 has been powered On. Press [Enter] or [Menu] to return to the main menu.



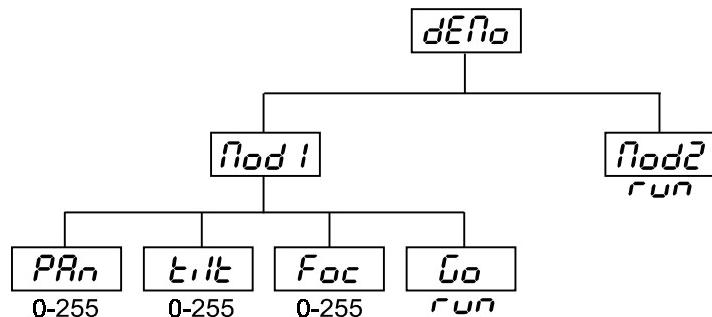
Switch On/Off the lamp

Use the [+] and [-] keys to select "On" if you wish the switch On the lamp or "Off" if you wish switch Off the lamp and press [Enter] to confirm or [Menu] to cancel and return to the main menu.



Demo sequences

This function allows you to run a special demo-test sequences without an external controller, which will show you some possibilities of using VISION 250. Press [+] and [-] keys to select the "Mod1" or "Mod2" sequences. The "Mod1" is suitable for projections on the wall, ceiling or ground without any mirror-movement, the "Mod2" uses all VISION 250 functions and therefore is good for a complete introduction of the fixture.



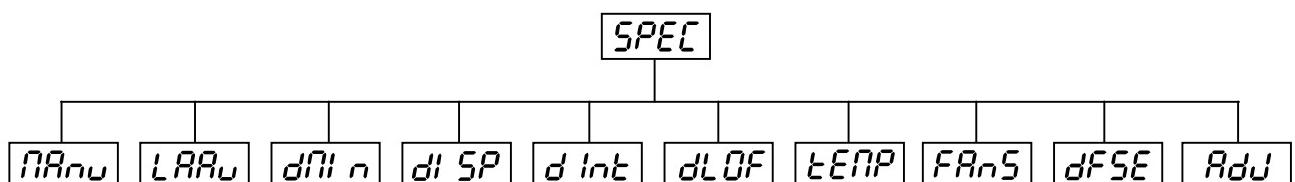
Reset Function

Press [Enter] key to run reset. This option enables the VISION 250 to index all effects (functions) and return to their standard positions.

8.2 SPEC -Special functions

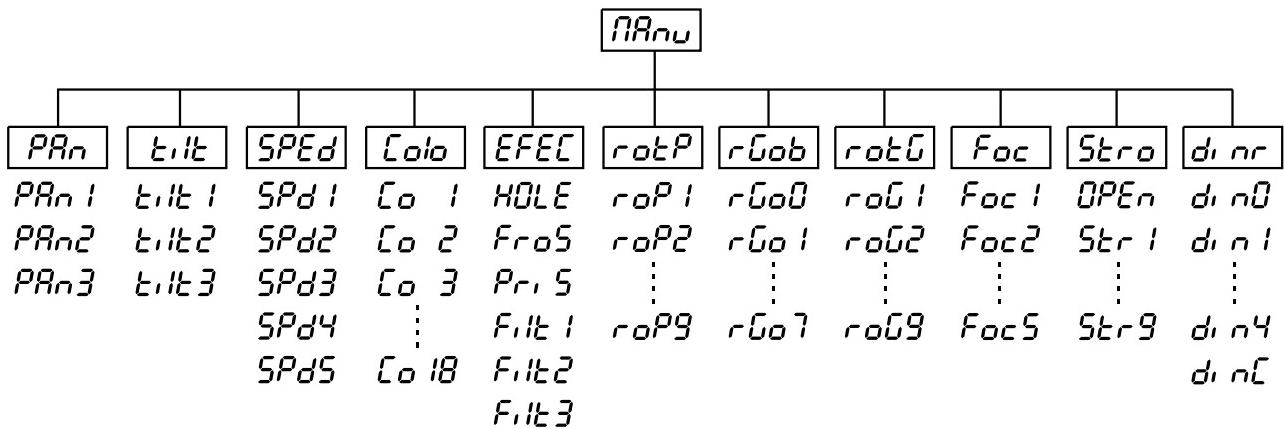


Use the [+] and [-] keys to browse through the special functions and select the one by pressing [Enter].



Manual control of effects

This function allows you to control manually the channel functions of the fixture. Use the [+] and [-] keys to select desired function and press [Enter] to adjust the effect or [Menu] to cancel and return to the menu.



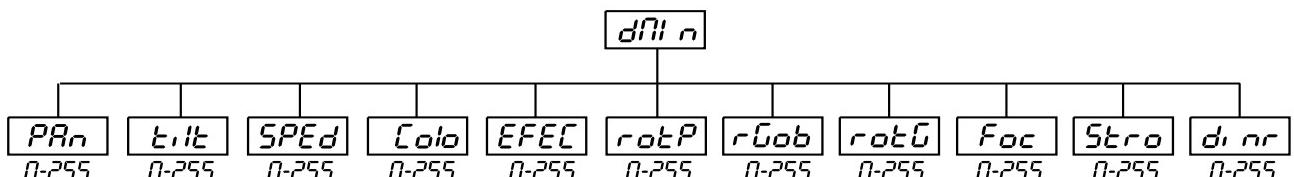
LARu Lamp On automatically

This function enables to switch On the lamp automatically after switching On the fixture. Use the [+] and [-] keys to select "On" if you wish to switch On the lamp automatically after switching On the fixture or "Off" if you wish the lamp off after switching On the fixture and press **[Enter]** to confirm or **[Menu]** to cancel and return to the menu.



dIn DMX values

Readout DMX values of each channel received by the fixture. Use the [+] and [-] keys to select desired channel and press **[Enter]** to read its value coming to the fixture or **[Menu]** to cancel and return to the menu.



dISP Automatic blackout of display

This function allows you to keep the display On or to turn Off automatically 2 minutes after last pressing any key on the control board. Use the [+] and [-] keys to select "On" if you wish to keep the display On or "Off" if you wish to turn Off automatically 2 minutes after last pressing any key on the control board and press **[Enter]** to confirm or **[Menu]** to cancel and return to the menu.



dInt Display intensity

By this function you can adjust from 20% to 100% the intensity of the display. Use the [+] and [-] keys to select the level of the display intensity and press **[Enter]** to confirm or **[Menu]** to cancel and return to the menu.

dl OF**Lamp Off via DMX**

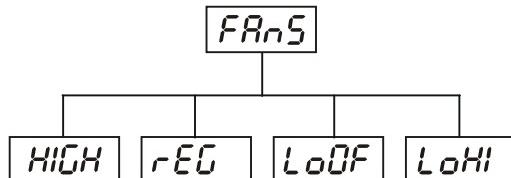
This function allows you to switch Off the lamp by DMX. Use the [+] and [-] keys to select "On" if you want to switch Off the lamp by DMX or "Off" if you don't want to switch Off the lamp by DMX and press [Enter] to confirm or [Menu] to cancel and return to the menu.

TEMP**Temperature**

Temperature readouts of fixture inside in Celsius. Inside temperatures below 60° C are not critical. 60° C and more lead to the lamp being switched off. Please note that the outside temperature should not exceed 45° C.

FAnS**Fan speed operating mode**

By using this function you can choose 4 types of fan speed operating modes. Browse through this menu by the pressing [+] and [-] keys - the display shows step by step these messages: "**HIGH, reG, LoOF, Lo.HI,**". Press [Enter] if you wish to select one of them or [Menu] to cancel and return to the menu.

**HI GH****high (max) speed of fans**

The cooling fan works on max. speed (max. cooling)

rEG**continuous controlling of the fan speed**

the fan automatically raises its speed in order to control inside temperature of the lighting, if the temperature inside increases about certain level (the low fan speed reduces the cooling of the lighting). This cycle can repeat several times until the temperature inside is on suitable level.

LoOF**low speed/Switch Off the lamp operating**

the fan keeps the adjusted low speed until the temperature exceeds max. inside temp., then the VISION 250 automatically switch Off the lamp.

LoHI**low/high speed of the fan operating**

the fan keeps the adjusted low speed until the temperature exceeds max. inside temp. of the fixture, then the VISION 250 automatically switch from low to high the fan speed.

dfSE

Default settings

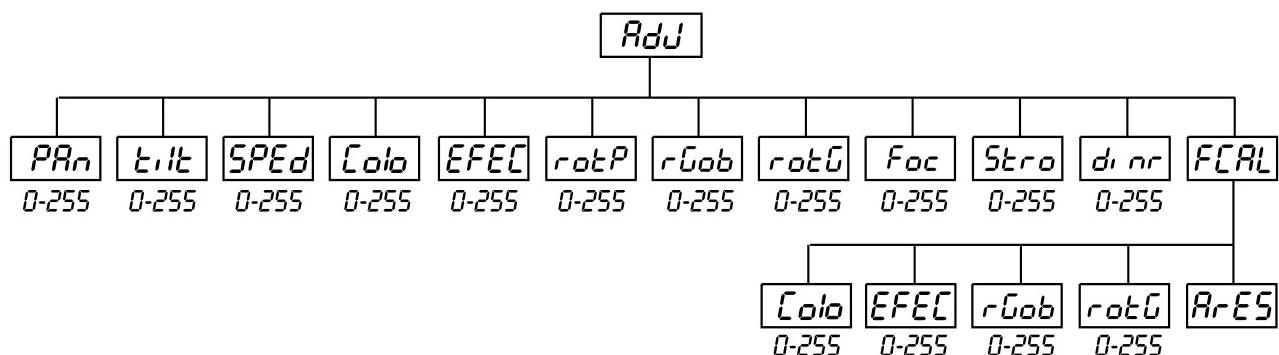
Press [Enter] to reset all fixture personalities (not the adjusting functions) to the default values. On the display will appear "rSt" meaning that the fixture makes the reset. See the table of personality setting and their default positions.

Personality	Display	Default values (SHADED)
Pan reverse	<i>rPA</i> _n	<i>On</i> <i>OFF</i>
Tilt reverse	<i>rTilt</i>	<i>On</i> <i>OFF</i>
Movement resolution	<i>16br</i>	<i>On</i> <i>OFF</i>
Lamp on automatically	<i>LAAu</i>	<i>On</i> <i>OFF</i>
Automatic blackout of display	<i>dISp</i>	<i>On</i> <i>OFF</i>
Display intensity	<i>dInt</i>	<i>20 40 60 80 100</i>
Lamp Off via DMX	<i>dLOF</i>	<i>On</i> <i>OFF</i>
Fan speed operating mode	<i>FRns</i>	<i>HIGH</i> <i>rEG</i> <i>LoDF</i> <i>LoHI</i>

Adu

Adjusting the default positions of colour,gobo and effect wheels

By this function you can calibrate and adjust the colour and CMY to their standard/right positions. Use the [+] and [-] keys to browse through the adjusting menu - the display shows step by step these messages: " **PAn**, **Tilt**, **SPEd**, **Colo**, **EFEC**, **rotPrGob**, **rotG**, **Foc**, **dimr**, **FCAL**" by which you can adjust the fixture to the required/desired position (0-255) before the function calibration. Then when the positioning is finished use the last "**FCAL**" function (Fixture calibration).



1. Calibration via the control board

Press [Enter] and the [+] and [-] keys in order to display the following messages: "Colo, EFEC, rGob, rotG," for very smooth function calibration. Select one of them, press [Enter] and use the [+] and [-] keys in order to adjust their right value from 0 to 255. Then press [Enter] to confirm or [Menu] to cancel and return to the menu. This can be repeated for each calibration parameter if it is required. When the calibration is finished, it is necessary to use the "ArES" function in order to write the calibration values to the memory (EPROM) and to make a reset in order to check the newly adjusted positions of the colour, gobo and effect wheels. When the reset of the fixture is finished, the display will show the "FCAL" message. Press [Enter] to repeat the calibration or [Menu] to return to the "Adj" menu.

2. Calibration via the external controller

Press [Enter] and the [+] and [-] keys in order to display the following messages: "Colo, EFEC, rGob, rotG," - calibration parameters. Select one of them and press [Enter].

Now you can calibrate the colour, gobo and effect wheel by your controller. The DMX calibration protocol is described in the table.

DMX Calibration protocol:

DMX chanel	Function	
1	Colour	m i m S c m o o t h e p Calibration 0-255
2	No function	m o v r e o o s t e n e t Calibration 0-255
3	Effect	m o m s e n t Calibration 0-255
4	Rotating gobo	m o m s e n t Calibration 0-255
5	Gobo rotating	m o m s e n t Calibration 0-255
6	No function	
7	Colours	Standard protocol
8	No function	
9	Effect(prism)	Standard protocol
10	Prism rotation	Standard protocol
11	Rotating gobos	Standard protocol
12	Gobo rotation	Standard protocol
13	No function	
14	Focus	Standard protocol
15	Strobo	Standard protocol
16	Dimmer	Standard protocol

After having calibrated required functions press [Enter] to confirm (or [Menu] to cancel and return to the menu without reset by the "ArES" function) and use the "ArES" function in order to write the calibration values to the memory (EEPROM) and to make a reset in order to check the new adjusted positions of the colour, effect and rot.gobo wheels and gobo indexing .

9. Error and information messages

HEAt

This message appears if you try to switch on the lamp within 5 minutes after having switched it off (the lamp is too hot). The message will appear on the display if the lamp doesn't ignite within 28 seconds. The VISION 250 will store this information and automatically ignite the lamp when the 5 minutes period has expired.

LAEr

The ignition of the lamp is seven times unsuccessful (the HEAt message appeared six times before), and the display shows "**LAEr**", meaning that the lamp could be damaged or even missed, the fixture is overheating (this can occur if the ambient temperature is 45° C or more) or there could be a failure on the ignitor or ballast. Please place or replace the lamp, check the ambient temperature or contact your dealer if the situation was not caused by the lamp.

FAn

The message informs you that the fixture was overheating and switched off. This message will appear on the display if the fan speed operating "LOOF" was selected.

MbEr

This messsage informs you that the main PCB does not communicate correctly with the Control Board.

CoEr (color-wheel error)

This messsage will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driver circuit on the main PCB). The color-wheel is not located in the default position after the reset.

rGEr (rotating gobo wheel error)

This messsage will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepper motor is failed (or its driver circuit on the main PCB). The rotating gobo wheel is not after the reset in the default position.

IGEr (rotating gobo indexing error)

This messsage will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepper motor is failed (or its driver circuit on the main PCB). The rotating gobo is not after the reset in the default position.

EFEr (effect wheel error)

This messsage will appear after the reset of the fixture if the magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepper motor is failed (or its driver circuit on the main PCB). The effect wheel is not after the reset in the default position.

FtEr

This error message informs you that the fixture was overheating (occured if the ambient temperature is 45° C or more) and that the relay switched off the lamp. This message will appear on the display until the temperature will be on a suitable level, then the display will show the "**HEAt**" message meaning the lamp is too hot (explanation see above).

SnEr

This message appears if the lamp lighting sensor is failed.

PoEr

This message will appear if the fixture was shortly disconnect from the main.

FrEr

It will appear if the frequency of the main is not standard 50 or 60Hz.

10. Technical specifications

Power supply:

- Voltage.....115/208/230/240 V AC, 50/60 Hz ~
- Fuse.....T 6,3 A@115V
- Fuse.....T 3,15 A@230V
- Power consumption.....500VA

Motors:

- 9 high quality stepping-motors controlled by microprocessors

Lamp:

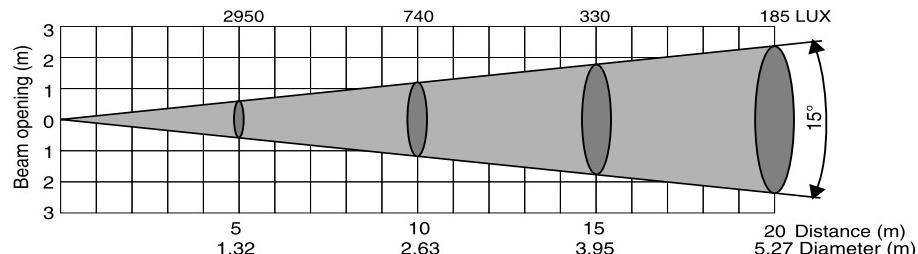
- MSD/HSD 250 GY-9,5 or MSD 250/2 GY-9,5

Optical system:

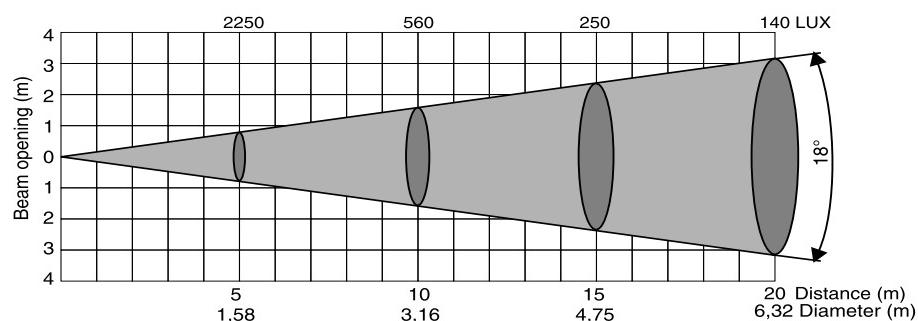
- Double condensor lens with high efficiency parabolic mirror
- Standard 15° objective
- Optional narrow 12° objective or wide 18° objective

Beampath:

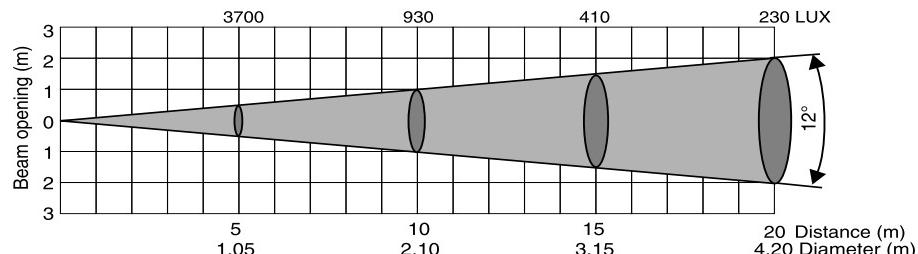
15° radiation angle - standard objective



18° radiation angle - optional objective



12° radiation angle - optional objective



Colours:

- 11 dichroic-filters plus white
- Colour-wheel with variable rotation speed

Rotating gobos:

- 4 metal gobo, 1 glass gobos and 1 dichroic gobo rotating in both directions at different speeds
- gobo indexing
- rotating gobo wheel cont. rotation

Strobe:

- Strobe effect with variable speed (1 - 10 flashes per second)

Dimmer:

- Smooth dimmer from 0 - 100 %

Effects:

- Special effect wheel with frost filter, color temperature filters 3200 K and 5600 K, UV filter

Prisma:

- 3 facet prism rotating in both directions at different speeds situated on effect wheel

Focus:

- Motorized focus from near to far

Electronics:

- Addressing, special functions setting, effects calibration via control panel with 4-digit LED display
- Readout fixture and lamp usage, receiving DMX values, temperature, etc
- Built-in analyzer for easy fault finding,error messages
- Remotely switching of the lamp
- Bilt-in demo sequences
- Silent fans cooling, remotely controllable speed of fans
- Self-resetable thermo-fuse
- Digital serial input DMX-512
- DMX-control via every standard DMX controller
- 14 DMX-channels (8 bit Pan/Tilt movement resolution)
- 16 DMX-channels (16 bit Pan/Tilt movement resolution):
 - Channel 1: Horizontal mirror-movement 8 bit
 - Channel 2: Vertical mirror-movement 8 bit
 - Channel 3: Fine Horizontal mirror-movement 16 bit
 - Channel 4: Fine Vertical mirror-movement 16 bit
 - Channel 5: Pan/Tilt speed
 - Channel 6: Fan speed, lamp On/Off, reset
 - Channel 7: Colours
 - Channel 8: No function
 - Channel 9: Frost,correction filters,3-facet prism
 - Channel 10: Prism rotation
 - Channel 11: Rotating gobos
 - Channel 12:Gobo rotation,gobo indexing
 - Channel 13: No function
 - Channel 14: Focus
 - Channel 15: Shutter, strobe
 - Channel 16: Dimmer

Temperatures:

- Maximum ambient temperature t_a : 45° C
- Maximum housing temperature t_B (steady state): 95° C

Minimum distances:

- Min.distance from flammable surfaces: 0,5m
- Min.distance to lighted object: 0,8m

Housing

- Easy access to lamp and main components thanks to large opening cover and the projector's modular construction.

Dimensions and weight:

LxWxH: 629x306x215 mm

Weight:

19 kg

11. Maintenance and cleaning

It is absolutely essential that the fixture is kept clean and that dust, dirt and smoke-fluid residues must not build up on or within the fixture. Otherwise, the fixture's light-output will be significantly reduced. Regular cleaning will not only ensure the maximum light-output, but will also allow the fixture to function reliably throughout its life. A soft lint-free cloth moistened with any good glass cleaning fluid is recommended, under no circumstances should alcohol or solvents be used!

DANGER!
***Disconnect from the mains before starting any
maintenance work***

The front mirror and objective lens will require weekly cleaning as smoke-fluid tends to building up residues, reducing the light-output very quickly. The cooling-fan should be cleaned monthly.

The gobos may be cleaned with a soft brush. The interior of the projector should be cleaned at least annually using a vacuum-cleaner or an air-jet.

The dichroic colour-filters, the gobo-wheel and the internal lenses should be cleaned monthly.

To ensure a proper function of the gobo-wheel, we recommend lubrication in six month intervals. The quantity of oil must not be excessive in order to avoid that oil runs out when the gobo-wheel rotates.

12. Appendix

We believe you will enjoy your VISION 250. We assure you will enjoy this product for years if you follow the instructions given in this manual.

If you have any questions and comments, please do not hesitate to contact us.

Please note: errors and omissions for every information given in this manual excepted. Every information is subject to change without prior notice. Any claim due to missing or wrong information in this manual is herewith excluded!